

IN THE CLAIMS:

Summary of Current Claim Amendments:

Please cancel Claims 5, 19-37 and 42, without prejudice to or disclaimer of the subject matter therein.

Please amend Claims 1, 2, 4, 6 and 38-41 as follows, without prejudice to or disclaimer of the subject matter therein. Claims 3 and 7-18 are reiterated below without amendment.

Listing of Claims:

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- 13.1
1. (Currently Amended) A chimeric fibroblast growth factor (FGF), comprising:
    - a) a biologically active fibroblast growth factor (FGF) protein having a first amino acid sequence; and,
    - b) a penetratin peptide having a second amino acid sequence, wherein said penetratin peptide transports said chimeric fibroblast growth factor (FGF) across a lipid bilayer of a cell independently of the presence of an FGF receptor, wherein said second amino acid sequence is linked to said first amino acid sequence; wherein said chimeric fibroblast growth factor (FGF) is characterized by:
      - i) in the absence of heparan sulfate, said chimeric FGF has fibroblast growth factor (FGF) biological activity ~~in the absence of heparan sulfate~~; and,
      - ii) entry into a living cell in the absence of a receptor that binds to FGF.
  2. (Currently Amended) The chimeric fibroblast growth factor (FGF) of Claim 1, wherein said chimeric FGF has FGF biological activity that is characterized by:
    - a) repression of terminal differentiation in the absence of heparan sulfate; and,
    - b) promotion of cell proliferation in the absence of heparan sulfate.

3. (Original) The chimeric fibroblast growth factor (FGF) of Claim 1, wherein said second amino acid sequence is linked to the N-terminus of said first amino acid sequence.

4. (Currently Amended) The chimeric fibroblast growth factor (FGF) of Claim 1, wherein said FGF protein is ~~encoded by a nucleic acid molecule that hybridizes under stringent hybridization conditions to the complement of a nucleic acid molecule encoding a protein selected from the group consisting of fibroblast growth factor-1 (FGF-1) protein and at least about 70% identical to a fibroblast growth factor-2 (FGF-2) protein represented by SEQ ID NO:5~~, wherein said FGF protein has FGF-2 biological activity.

5. (Cancelled)

6. (Currently Amended) The chimeric fibroblast growth factor (FGF) of Claim 1, wherein said FGF protein comprises an amino acid sequence selected from the group consisting of SEQ ID NO:5; and SEQ ID NO:6; ~~SEQ ID NO:7 and SEQ ID NO:8~~.

7. (Original) The chimeric fibroblast growth factor (FGF) of Claim 1, wherein said FGF protein is a fibroblast growth factor-2 protein.

8. (Original) The chimeric fibroblast growth factor (FGF) of Claim 1, wherein said FGF protein has an amino acid sequence comprising from position 18 through position 172 of SEQ ID NO:2 or from position 17 through 171 of SEQ ID NO:4.

9. (Original) The chimeric fibroblast growth factor (FGF) of Claim 1, wherein said penetratin peptide is selected from the group consisting of:

a) a first peptide having an amino acid sequence selected from the group consisting of:

i)  $X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13}-X_{14}-X_{15}-X_{16}$ ;

and,

ii)  $X_{16}-X_{15}-X_{14}-X_{13}-X_{12}-X_{11}-X_{10}-X_9-X_8-X_7-X_6-X_5-X_4-X_3-X_2-X_1$ ;

wherein  $X_1, X_2, X_3, X_4, X_5, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15}$ , and  $X_{16}$  each represent an  $\alpha$ -amino acid, between 6 and 10 of which are hydrophobic amino acids; and wherein  $X_6$  represents Trp; and,

b) a second peptide comprising amino acid residues 49-57 of HIV Tat protein (SEQ ID NO:17).

10. (Original) The chimeric fibroblast growth factor (FGF) protein of Claim 9, wherein said second peptide does not comprise amino acid residues 22-36 or 73-86 of HIV Tat protein (SEQ ID NO:17).

11. (Original) The chimeric fibroblast growth factor (FGF) of Claim 9, wherein said first peptide is selected from the group consisting of a peptide comprising helix 3 of a homeobox domain and a homeobox domain.

12. (Original) The chimeric fibroblast growth factor (FGF) of Claim 9, wherein said first peptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:9, amino acid residues 42 through 58 of SEQ ID NO:9, amino acid residues 43 through 59 of SEQ ID NO:9, amino acid residues 43 through 58 of SEQ ID NO:9, amino acid residues 58 through 43 of SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, and SEQ ID NO:16.

13. (Original) The chimeric fibroblast growth factor (FGF) of Claim 9, wherein said first peptide comprises amino acid residues 2-17 of SEQ ID NO:2.

14. (Original) The chimeric fibroblast growth factor (FGF) of Claim 9, wherein said second peptide comprises an amino acid sequence from an HIV Tat protein selected from the group consisting of amino acid residues 37-72 of SEQ ID NO:17, amino acid residues 38-72 of SEQ ID NO:17, amino acid residues 47-72 of SEQ ID NO:17, amino acid residues 37-58 of SEQ ID NO:17, amino acid residues 38-58 of SEQ ID NO:17, amino acid residues 47-58 of SEQ ID NO:17, amino acid residues 1-21 and 38-72 of SEQ ID NO:17, amino acid residues 47-62 of SEQ ID NO:17, amino acid residues 38-62 of SEQ ID NO:17, amino acid residues 1-72 of SEQ ID NO:17, amino acid residues 1-58 of SEQ ID NO:17, and amino acid residues 48-60 of SEQ ID NO:17.

15. (Original) The chimeric fibroblast growth factor (FGF) of Claim 9, wherein said second peptide comprises amino acid residues 48-60 of SEQ ID NO:17 or amino acid residues 2-14 of SEQ ID NO:4.

16. (Original) The chimeric fibroblast growth factor (FGF) of Claim 1, wherein said chimeric fibroblast growth factor (FGF) comprises an amino acid sequence selected from the group consisting of SEQ ID NO:2 (HLX-FGF) and SEQ ID NO:4 (TAT-FGF).

17. (Original) The chimeric fibroblast growth factor (FGF) of Claim 1, wherein said chimeric fibroblast growth factor (FGF) is encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:1 (HLX-FGF) and SEQ ID NO:3 (TAT-FGF).

18. (Original) A therapeutic composition comprising the chimeric fibroblast growth factor (FGF) of Claim 1 and a pharmaceutically acceptable excipient.

19-37. (Cancelled)

31. 38. (Currently Amended) A method to repress terminal differentiation and promote proliferation in a cell, comprising administering to a cell a chimeric fibroblast growth factor (FGF) protein according to Claim 1 comprising:

~~\_\_\_\_\_ a) \_\_\_\_\_ a biologically active fibroblast growth factor (FGF) protein having a first amino acid sequence; and,~~

~~\_\_\_\_\_ b) \_\_\_\_\_ a penetratin peptide having a second amino acid sequence, wherein said penetratin peptide transports said chimeric fibroblast growth factor (FGF) across a lipid bilayer of a cell independently of the presence of an FGF receptor, wherein said second amino acid sequence is linked to said first amino acid sequence;~~

~~\_\_\_\_\_ wherein said chimeric fibroblast growth factor (FGF) is characterized by:~~

~~\_\_\_\_\_ i) \_\_\_\_\_ fibroblast growth factor biological activity in the absence of heparan sulfate; and,~~

~~\_\_\_\_\_ ii) \_\_\_\_\_ entry into a living cell in the absence of a receptor that binds to FGF.~~

39. (Currently Amended) The method of Claim 39 38, wherein said cell has reduced heparan sulfate proteoglycan production characterized by a reduction in both repression of terminal differentiation and promotion of proliferation in the presence of naturally occurring fibroblast growth factor.

40. (Currently Amended) The method of Claim 39 38, wherein said cell is a cell of patient that has a condition selected from the group consisting of stroke, nerve damage, bone damage, muscle damage, and a wound.

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41. (Currently Amended) The method of Claim 39 38, wherein said chimeric fibroblast growth factor (FGF) is administered to said cell *in vivo*.

42. (Cancelled)

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